

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

Claims 1-23 (canceled).

1                   **Claim 24 (new):** An anesthetic vaporizing system, said method, comprising:  
2                   a carrier gas source for delivering a carrier gas stream to a bypass valve, wherein  
3 the bypass valve splits the carrier gas stream into a first carrier gas stream for delivery to an inlet  
4 port and a second carrier gas stream for delivery to a joining valve;  
5                   a vaporizing chamber for an anesthetic agent, comprising the inlet port, an outlet  
6 port, a vaporizing means and a conduit for delivery of vaporized anesthetic from the outlet port  
7 to the joining valve; and  
8                   an array of sensors in flow communication with the joining valve to quantitate the  
9 anesthetic.

1                   **Claim 25 (new):** The system of claim 24, further comprising a detector  
2 operatively associated with each sensor that provides a response in the presence of an anesthetic  
3 vapor.

1                   **Claim 26 (new):** The system of claim 24, further comprising a fluid concentrator  
2 in flow communication with the sample chamber, the fluid concentrator having an absorbent  
3 material capable of absorbing the analyte and capable of desorbing a concentrated analyte.

1                   **Claim 27 (new):** The system of claim 24, wherein said vaporizing means  
2 comprises one or more of a heater, pressure source or aspirator.

**Claim 28 (new):** The system of claim 24, wherein said array of sensors comprises a member selected from the group consisting of a surface acoustic wave sensor, a quartz microbalance sensor; a conductive composite; a chemiresistor; a metal oxide gas sensor and a conducting polymer sensor, a dye-impregnated polymer film on fiber optic detector, a polymer-coated micromirror, an electrochemical gas detector, a chemically sensitive field-effect transistor, a carbon black-polymer composite, a micro-electro-mechanical system device and a micro-opto-electro-mechanical system device.

**Claim 29. (new):** The system of claim 24, wherein said array of sensors comprises one or more conducting-polymer composite sensors.

**Claim 30 (new):** The system of claim 24, wherein said array of sensors is suitable for process control over the concentration of anesthetic gases.

**Claim 31 (new):** The system of claim 24, wherein said anesthetic is injected directly into the carrier gas stream.

**Claim 32 (new):** The system of claim 24, wherein said anesthetic is a volatile anesthetic.

**Claim 33 (new):** The system of claim 32, wherein said anesthetic is selected from the group consisting of halothane, isoflurane, sevoflurane, desflurane and enflurane.

**Claim 34 (new):** A method for monitoring an anesthetic vapor, said method comprising:

- a) contacting a sensor array with a anesthetic vapor to produce a response; and
- b) detecting the response with a detector, to quantitate the anesthetic vapor.

**Claim 35 (new):** The method in accordance with claim 34, wherein said sensor array comprises a member selected from the group consisting of a surface acoustic wave sensor, a quartz microbalance sensor; a conductive composite; a chemiresistor; a metal oxide gas sensor

and a conducting polymer sensor, a dye-impregnated polymer film on fiber optic detector, a polymer-coated micromirror, an electrochemical gas detector, a chemically sensitive field-effect transistor, a carbon black-polymer composite, a micro-electro-mechanical system device and a micro-opto-electro-mechanical system device.

**Claim 36 (new):** The method in accordance with claim 34, further comprising inputting said response to a neural net trained against said anesthetic vapor.

**Claim 37 (new):** The method in accordance with claim 34, further comprising concentrating said anesthetic vapor prior to contacting said sensor array.

**Claim 38 (new):** The method in accordance with claim 37, wherein said anesthetic vapor is concentrated in a breath collector concentrator.

**Claim 39 (new):** The method in accordance with claim 38, wherein said breath collector concentrator is adapted to receive breath from the nose, nasal passages and mouth.

**Claim 40 (new):** The method in accordance with claim 38, wherein said breath collector concentrator is adapted to provide breath from the nostril to avoid cross-contamination from the mouth.

**Claim 41 (new):** The method in accordance with claim 34, wherein said anesthetic is a volatile anesthetic.

**Claim 42 (new):** The method in accordance with claim 41, wherein said anesthetic is selected from the group consisting of halothane, isoflurane, sevoflurane, desflurane and enflurane.